

A study to assess the knowledge and expressed practices of over-the-counter (otc) drugs usage among the urban population of Shillong, Meghalaya

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Abstract

Over-the-counter (OTC) drugs account for 55% of drugs used by Indians. Though they are safe and effective, there are risk for adverse events, dependence and misuse. Therefore, a study to assess the knowledge and expressed practices of over-the-counter (OTC) drugs usage among the urban population of Shillong, Meghalaya was carried out.

A non-experimental research study was conducted using purposive sampling technique among 206 participants residing in an urban area of Shillong, Meghalaya. Data was collected using semi-structured questionnaire.

The study revealed that out of 206 participants, 164 have good knowledge regarding over-the-counter (OTC)

drugs, 39 have average knowledge and 3 have poor knowledge. For expressed practices of over-the-counter (OTC) drugs usage it was found that majority (85.4%) does not prefer them for all type of illnesses, 96.6% checks expiry date and 87.9% does not encourage usage of over-the-counter (OTC) drugs. 72(34.9%) participants use over-the-counter (OTC) drugs occasionally for gastritis and improving digestion whereas 134(65.1%) participants use rarely for fever, headache, body ache and cough.

Study revealed that majority of the residents have good knowledge on over-the-counter (OTC) drugs. With regard to expressed practices, majority use over-the-

counter (OTC) drugs for minor ailments like gastritis, fever, aches and pains.

Keywords: knowledge, expressed practices, over-the-counter (OTC) drugs

Introduction

Over-the-counter (OTC) drugs are drugs that have been discovered to be protected and fitting for utilization without the supervision of a human services proficient, for e.g., a doctor, and they can be bought by buyers without a prescription. These drugs are often located at pharmacy with easy access by the population. [1]

The incidence of over -the - counter (OTC) drug usage has increased drastically over the years. In many countries, there are regulatory agency to assure the safety of the over-the-counter (OTC) drugs usage. Consuming over-the-counter (OTC) drugs still have risks as some interact with other medicines, supplements cause adverse effects of people with certain conditions. [3]

Many countries recognize over-the-counter (OTC) drugs as a separate category of drugs and have established regulations for their use. In India, till date there are no guidelines for licensing of over-the-counter (OTC) drugs. There is no separate category allotted for over-the-counter (OTC) drugs in India and the drugs which do not come under the prescribed drugs are generally sold as over-the-counter (OTC) drugs.[2]

Increasing availability of over-the-counter (OTC) drugs usage encourage people to believe that is a drug treatment for many illnesses. Furthermore, the over use of some drugs can delay or hidden the diagnosis of serious illness, with increasing risk of maintenance with other medications. [4]

Although over-the-counter (OTC) drugs are meant for self -medication and there is a big potential for misuse and abuse of that kind of drugs. Improper use and

inability to follow instructions and due to lack of knowledge of these drugs can lead to serious implications especially in children, elderly and people with other chronic illness. [5]

Objectives

A) Primary objectives

1. To determine the knowledge of over-the-counter (OTC) drugs among the urban population of Shillong, Meghalaya.

2. To assess the expressed practices of over-the-counter (OTC) drugs usage among the urban population of Shillong, Meghalaya.

B) Secondary objectives

1. To estimate the frequency of expressed practices of over -the -counter (OTC) drugs usage among the urban population of Shillong, Meghalaya.

Research assumptions

A-1. The urban population of Shillong, Meghalaya may have knowledge regarding over-the-counter (OTC) drugs.

A-2. There may be high frequency of practices of usage of over- the-counter (OTC) drugs among the urban population of Shillong, Meghalaya.

Operational definitions

1. Expressed practices: It refers to the practice that the urban population of Shillong, Meghalaya expressed of usage of over -the -counter (OTC) drugs according to their knowledge.

2. Over-the-counter (OTC) DRUGS: Over-the-counter (OTC) drugs are drugs sold directly to a consumer without a requirement for a prescription from a health care professional as opposed to prescription drugs, which may be supplied only to consumer possessing a valid prescription.

Research methodology

The research methodology was formed on the basis of the objectives. It includes the Research Design, Variables, Settings, Sampling Technique, Development and Description of Data Collection Tool and Procedure of carrying out the data collection.

Research design: Non-experimental survey research design.

Variables

Independent variables

- Demographic variables - Age, sex, literacy, occupation and type of family of the participants.
- Outcome variables - Knowledge and expressed practice on over-the-counter (OTC) drugs usage.

Knowledge and expressed practice regarding the usage of over-the-counter (OTC) drugs.

Setting: The study was conducted in urban population Shillong, Meghalaya.

Population: The study population included the head of the household or the caregiver residing in Relief and Rehabilitation (R&R) Colony Welfare Society which is an urban community of Shillong, East Khasi Hills, Meghalaya.

Sampling design

Sample size: The sample size for the study was 206.

Sampling technique: The families were selected through purposive sampling technique.

Criteria for sample selection

Inclusion criteria

The study includes the head of the household or the caretaker of the family who were,

- Residing in Relief and Rehabilitation (R&R) Colony Welfare Society, which is an urban community of Shillong, Meghalaya
- Willing to participate

- Able to speak and understand Khasi, English, Hindi language.

Exclusion criteria

- Participants who are not willing to participate
- A house which was lock during the time of data collection
- A house where no adult was present during the time of data collection

Development of data collection tool

The data collection tool as developed by doing an extensive review of literature. The various sources were reviewed to develop an appropriate tool for data collection.

Description of data collection tool

To collect the necessary data, a semi-structured questionnaire to assess the knowledge and expressed practice regarding the usage of over-the-counter (OTC) drugs consisting of three sections was developed.

Section-a: It comprised of sample characteristics consisting of 7 questions. It includes demographic variables of the participants such as Age, Gender, Religion, Educational status, Monthly income of the family and Type of family. It also includes the source from where Over-the-counter (OTC) drugs are obtained.

Section-b: It comprised of 8 Multiple Choice Questions which were based on the Knowledge of the participants on use of Over-the-counter (OTC) drugs. The maximum knowledge score was 8 and it was further classified into three categories that are Good knowledge score, Average knowledge score and Poor knowledge score.

Section-c: It comprised of 20 questions out of which 15 are structured questions and 5 are open-ended questions based on the expressed practice of over-the-counter (OTC) Drugs.

Validity of tool

The content validity of tools was obtained from the experts belonging to the department of Pharmacology, Community Medicine, General Medicine, Forensic Medicine, Community Health Nursing, Public Health Nursing. The valuable suggestions and opinions were incorporated in the final version of the tool.

Data collection procedure for the final study

The final study was planned to be conducted from 10th May 2021 to 15th May 2021 but due to the current pandemic it was postponed to the month of August where it was conducted from 16th August till 21st August 2021. Prior permission was obtained from the Principal, College of Nursing, NEIGRIHMS, Directorate of Health Services (DHS) Shillong, Meghalaya, Senior Medical Officer (SMO) and Public Health Nurse (PHN) of Rynjah State Dispensary, Shillong, and the President of Relief and Rehabilitation (R&R) Colony Welfare Society, Shillong-6. Information sheet was provided and consent forms were taken from the participants. COVID appropriate behavior was followed during the interview. The data collection was done by administering structured and semi-structured questionnaires comprising of three sections. The maximum score is 8 for knowledge. For each correct answer the participants were given a score of 1 and for each incorrect answer the participants were given a score of 0. There was no negative marking.

Scoring: The score was divided into three categories including Good knowledge score, Average knowledge score and Poor knowledge score. The Good knowledge score range was from 6 to 8 marks, Average knowledge score range was from 3 to 5 marks and the Poor knowledge score range was less than or equal to 2 marks.

Interpretation of score: Based on the objectives of the study, score was interpreted using descriptive statistical

analysis like frequency and percentage tables. Plans for data analysis were outlined as follows-

- Sample characteristics were analyzed using descriptive statistics
- Knowledge Score of the participants regarding over-the-counter (OTC) drugs were interpreted into frequency and percentage shown with the help of a table.
- Expressed practices of over-the-counter (OTC) drugs usage was analyzed using descriptive statistics with the help of tables where similar responses were clubbed under a common theme.

Analysis and interpretation

Section i: characteristics of the study participants

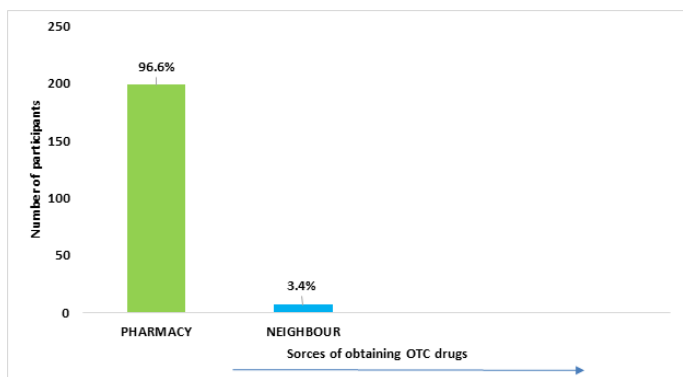
Table 1: Demographic profile of the study participants.

Variables		Frequency (f)	Percentage (%)
AGE (in years)	20-39	141	68.4%
	40-59	57	27.7%
	60-89	8	3.9%
Gender	Male	110	53.4%
	Female	96	46.6%
Religion	Christian	95	46.1%
	Non-Christian	111	53.9%
Literacy	Illiterate	1	0.5%
	Under-metric	23	11.2%
	Intermediate	56	27.2%
	Graduate	96	46.6%
	Post-graduate	30	14.5%
Income (in rupees)	1000-10000	42	20.4%
	11000-20000	51	24.7%
	21000-30000	55	26.7%
	31000-40000	15	7.3%
	41000-50000	16	7.8%

	51000 and above	27	13.1%
Type of family	Nuclear	142	68.9%
	Joint	64	31.1%

The above table shows the demographic variable of the participants out of 206 participants, 141 were in the age group of 20-39, 57 were in the age group of 40-59 and 8 were in the age group of 60-89. 110 participants were male and 96 were female, also 95 participants were Christian and 111 were non-Christian. 1 participant among 206 was illiterate, 23 were under-metric, 56 were intermediate, 96 were graduates and 30 were post-graduate. 118 participants have a monthly income of 1000-25000, 63 have 26000-50000, 12 have 51000-75000 and 13 have 76000-100000. 142 participants stay in a nuclear family and 64 stay in a joint family.

Figure 1: Bar diagram showing the percentage of participants obtaining over-the-counter (OTC) drugs from various sources. N=206



The above figure shows that out of 206 participants, 199 (96.6%) participants obtain over-the-counter (OTC) drugs from pharmacy and 7 (3.4%) participants obtain over-the-counter (OTC) drugs from their neighbors.

Section 2: level of knowledge of the participants regarding over-the-counter (otc) drugs

Table 2: Frequency and percentage distribution of participants in three categories of knowledge on

understanding of the term over-the-counter (OTC) drugs
N =206

Knowledge category	Score	Frequency (f)	Percentage (%)
Good	6-8	164	79.61 %
Average	3-5	39	18.93%
Poor	0-2	3	1.46 %

The above table depicts that out of 206 participants, 164 (79.61%) participants have good knowledge on over-the-counter (OTC) drugs, 39 (18.93%) participants have average knowledge and 3 (1.46%) participants have poor knowledge.

Section 3: expressed practices of the participants regarding over-the-counter drugs (otc) usage

Table 3: Frequency and percentage distribution of participants regarding expressed practices of over-the-counter (OTC) drugs usage. N=206

Criteria	Yes		No	
	f	%	f	%
Preference of OTC drugs for all illnesses	30	14.6%	176	85.4%
Reading of instructions or drug label	178	86.4%	28	13.6%
Checking of expiry date	199	96.6%	7	3.4%
Changing drugs for same health problem	83	40.3%	123	59.7%
Reusing prescribed drug without consulting pharmacist/doctor	103	50%	103	50%
Consulting pharmacist/doctor regarding OTC drug being used	80	38.8%	126	61.2%
Increasing the dosage by	106	51.5%	100	48.5%
	175	84.9%	31	15.1%
	75	36.4%	131	63.6%
	63	30.6%	143	69.4%

oneself	146	70.9%	60	29.1%
Discontinuation of usage of OTC drug on experiencing side effects	17	8.3%	189	91.7%
Monitoring health condition after using OTC drugs	72	34.9%	134	65.1%
Using different OTC drugs together	65	31.6%	141	68.4%
Experience of instant relief after taking OTC drug	25	12.1%	181	87.9%
Dependence on OTC drugs				
Belief on effectiveness of OTC drugs to the prescribed drugs				
Suggesting the use of OTC drugs				
Belief on encouragement of usage of OTC drugs				

The table shows that out of 206 participants, 85.4 % does not prefer over-the-counter (OTC) drugs for all type of illnesses, 86.4% read the instructions given, 96.6% checks the expiry date before use, 59.7% do not change drugs for the same health problem, 50% of the participants reuses drugs without consultation that was prescribed earlier for the same health problem, 38.8% consults with a pharmacist or a doctor regarding the over-the-counter (OTC) drug being used, 51.5% increases the dosage by themselves, 84.9% discontinue the use of over-the-counter (OTC) drugs on experiencing side effects, 63.6% monitor their health conditions after using over-the-counter (OTC) drugs, 30.6% uses different over-the-counter (OTC) drugs together, 70.9%

experience instant relief, 8.3 % are dependent on using over-the-counter (OTC) drugs, 34.9% belief on the effectiveness of over-the-counter (OTC) drugs, 31.6% suggests others to use over-the-counter (OTC) drugs and only 12.1% belief on the encouragement of usage of over-the-counter (OTC) drugs.

Table 4: Frequency and percentage distribution regarding conditions /situations leading to usage of over-the-counter (OTC) drugs. N =206

Criteria	Frequency (f)	Percentage (%)
Situations/conditions leading to usage of over-the-counter (OTC) drugs	108	52.4%
Emergency	65	31.6%
Minor illness	33	16%
Unavailability of doctor		

The above table shows that out of 206 participants, majority of them i.e., 108 (52.4%) participants use over-the-counter (OTC) drugs in case of emergency conditions such as diarrhea, vomiting and high fever; 65 (31.6%) participants use over-the-counter (OTC) drugs for minor illness like low grade fever, cough and toothache and 33 (16%) participants use it due to unavailability of doctor.

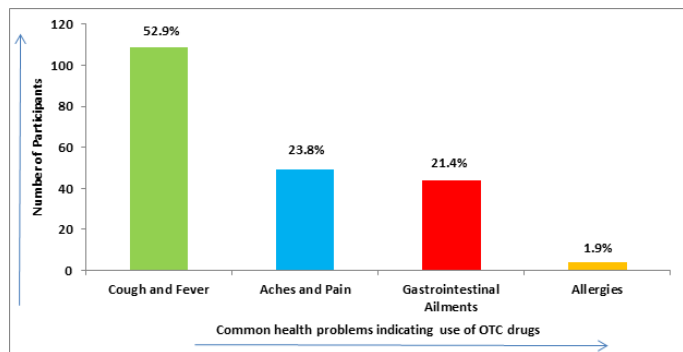
Table 5: Frequency and percentage distribution regarding the frequency of usage of over-the-counter (OTC) drugs. N =206

Criteria	Frequency (f)	Percentage (%)
Frequency of use of over-the-counter (OTC) drugs		
Occasionally	72	34.9%
Rarely	134	65.1%

The above table depicts that out of 206 participants, 72 (34.9%) participants use over-the-counter (OTC) drugs

occasionally for improving digestion and for gastritis. 134 (65.1%) participants use over-the-counter (OTC) drugs for fever, body ache, headache and cough.

Figure 2: Bar diagram showing common health problems for which over-the-counter (OTC) drugs are mostly used. N=206



The above figure reveals that out of 206 participants, 109 (52.9%) use over-the-counter (OTC) drugs for cough and fever, 49 (23.8%) participants use it for aches and pain such as headache, toothache and body ache, while 44 (21.4%) participants use it for gastrointestinal ailments including diarrhea, vomiting, gastritis and indigestion and 4(1.9%) participants use OTC drugs for allergies.

Table 6: Frequency and percentage distribution regarding factors/people influencing the practice of over-the-counter (OTC) drugs. N= 206

Criteria	Frequency (f)	Percentage (%)
Influencing factors		
None (Self)	153	74.3%
Internet	15	7.3%
Family/Relatives	38	18.4%

The above table reveals that out of 206 participants, 153 (74.3%) participants practice over-the-counter (OTC) drugs out of their own accord, 15 (7.3%) participants are influenced by internet and 38 (18.4%) are influenced by family or relatives.

Results

The study revealed that out of 206 participants, 164 have good knowledge regarding over-the-counter drugs, 39 have average knowledge and 3 have poor knowledge. For expressed practices of over-the-counter drugs usage it was found that majority (85.4%) does not prefer them for all type of illnesses, 96.6% checks expiry date and 87.9% does not encourage usage of over-the-counter drugs. 72(34.9%) participants use over-the-counter drugs occasionally for gastritis and improving digestion whereas 134(65.1%) participants use rarely for fever, headache, body ache and cough.

Discussion

A study was conducted to assess the knowledge and expressed practices of over-the-counter (OTC) drug usage among the urban population of Shillong, Meghalaya. The objective of the study was to determine the knowledge and to assess the expressed practices as well as to estimate the frequency of expressed practices of over-the-counter (OTC) drugs usage among the urban population of Shillong, Meghalaya. A total of 206 individuals participated in the study.

The study revealed that most of the participants were from the age group of 20-39 years. Majority of the participants, i.e., 110(53.4%) were male. The study showed that 164 (79.61%) participants have good knowledge on over-the-counter (OTC) drugs and only 3 (1.46%) participants have poor knowledge. It also shows that a majority of the participants, i.e., 199 (96.6%) participants, obtain over-the-counter (OTC) drugs from pharmacy. The study found that the expressed practices of over-the-counter (OTC) drugs usage of the participants was good as 85.4% does not prefer over-the-counter (OTC) drugs for all type of illnesses, 96.6% checks the

expiry date and only 8.3% of participants are dependent on using over-the-counter (OTC) drugs.

The study also revealed that 134 (65.1%) participants rarely use over-the-counter (OTC) drugs and only 108 (52.4%) use it in case of emergency conditions like diarrhea, vomiting and high-grade fever. Through the study it was also disseminated that the common health conditions for which over-the-counter (OTC) drugs were used was found to be fever and cough.

A similar study was conducted in the year 2016 by Nagarajaiah B. Hanumantharayappa and Shashikumar N. Siddaiah in Mandya district to assess the use of over-the-counter (OTC) drugs among the urban and rural population. The study included 400 participants among which 77.50% urban and 68.25% rural respondents reported the use of over-the-counter (OTC) drugs.

Conclusion

Study revealed that majority of the residents have good knowledge on over-the-counter drugs. With regard to expressed practices, majority use over-the-counter drugs for minor ailments like gastritis, fever, aches and pains occasionally. However, with increased usage of over-the-counter (OTC) drugs, there is an increasing risk of misuse which might affect the health of users. Therefore, awareness programs can be conducted in both clinical and community settings.

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